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TITLE: METHOD OF MEASURING THICKNESS OF RESIST FILM

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ABSTRACT:
PURPOSE: To measure the thickness of a resist film during coating, by comparing
the intensity of the light incident on the resist film applied to the surface of an object to be coated with that of the reflected light being the light passed through the resist film and reflected from the interface of the resist film and the object to be coated.

CONSTITUTION: When light 1 is incident on the surface of a liquid resist film 3 in an oblique direction, the incident light 1 is refracted from the surface of the resist film 3 to be incident to the interior of the resist film 3 and totally reflected from the boundary surface of the resist film 3 and an object 4 to be coated to again pass through the resist film 3 and refracted from the surface of the resist film 3 to become reflected light 2. Since there is a definite relation between the ratio of the intensity of the incident light 1 and that of the reflected light 2, the absorbability and concentration of the solute of the resist film and the length of the light passing route in the resist film, the thickness of the resist film at a drying time can be estimated by calculating the ratio of the intensity of the incident light 1 and that of

the reflected light 2.

PATENT ABSTRACTS OF JAPAN

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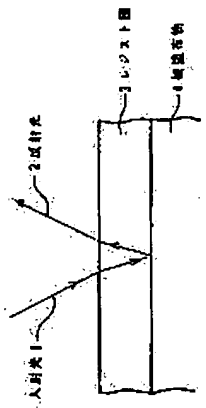
(72)Inventor : SAKA TAKETORA

(54) METHOD OF MEASURING THICKNESS OF RESIST FILM

(57)Abstract:
PURPOSE: To measure the thickness of a resist film during coating, by comparing the intensity of the light incident on the resist film applied to the surface of an object to be coated with that of the reflected light being the light passed through the resist film and reflected from the interface of the resist film and the object to be coated.
CONSTITUTION: When light 1 is incident on the surface of a liquid resist film 3 in an oblique direction, the incident light 1 is refracted from the surface of the resist film 3 to be incident to the interior of the resist film 3 and totally reflected from the boundary surface of the resist film 3 and an object 4 to be coated to again pass through the resist film 3 and refracted from the surface of the resist film 3 to become reflected light 2. Since there is a definite relation between the ratio of the intensity of the incident light 1 and that of the reflected light 2, the absorbability and concentration of the solute of the resist film and the length of the light passing route in the resist film, the thickness of the resist film at a drying time can be estimated by calculating the ratio of the intensity of the incident light 1 and that of the reflected light 2.



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